## Docket No.: 13744-00046-US

## AMENDMENTS TO THE CLAIMS

Please replace all previously entered claims with the claims in the following Listing of Claims.

## **Listing of Claims:**

1. (currently amended): A process for modifying a substrate having one or more functional groups selected from hydroxyl groups and primary and secondary amino groups, the process comprising contacting at least one substrate, which is selected from the group consisting of a biomolecule, a polymer and a surface, with a compound of formula I or II under conditions such that the functional groups react, with opening of the 1,3-dioxolane ring or 1,3-diazaheptane ring and formation of a covalent bond, with the compound of formula I or II

HN TN

I

II

in which

X in the compound of formula II-is CO CH=CH<sub>2</sub>, CO O-aryl, C<sub>2</sub>-C<sub>6</sub>-alkylene-SO<sub>2</sub>-CH=CH<sub>2</sub>-or CO-NH-R<sup>1</sup> and;

R is C<sub>1</sub>-C<sub>12</sub>-alkylene; and

k is an integer from 1 to 10,000, inclusive; and

if k is 1, X in the compound of formula I is CO O aryl, C<sub>2</sub>-C<sub>6</sub>-alkylene SO<sub>2</sub>-CH-CH<sub>2</sub> or CO-NH-R<sup>1</sup>; and

 $R^{1} \text{ is } C_{1}-C_{30}\text{-alkyl}, C_{1}-C_{30}\text{-haloalkyl}, C_{1}-C_{30}\text{-hydroxyalkyl}, C_{1}-C_{6}\text{-alkoxy}-C_{1}-C_{30}\text{-alkyl}, C_{1}-C_{6}\text{-alkyl}, C_{1}-C_{6}\text{-alkyl}, C_{1}-C_{20}\text{-alkyl}, C_{1}-C_{20}\text{-alkyl}$ 

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alkyl, ammonio- $C_1$ - $C_{30}$ -alkyl, polyoxyalkylene- $C_4$ - $C_{30}$ -alkyl, polysiloxanyl- $C_4$ - $C_{30}$ -alkyl, sulfono- $C_1$ - $C_{30}$ -alkyl, phosphono- $C_4$ - $C_{30}$ -alkyl, di( $C_4$ - $C_6$ -alkyl)phosphonato- $C_4$ - $C_{30}$ -alkyl, di( $C_4$ - $C_6$ -alkyl)phosphonato- $C_4$ - $C_{30}$ -alkyl or a saccharide radical and,

if k is an integer of more than 1, X is (i) the radical of a polyamine to which the moiety in brackets in the formula is bonded via (CO)NH groups or (ii) a polymeric skeleton to which the moiety in brackets in the formula is bonded via (CO), NH C<sub>2</sub>-C<sub>6</sub>-alkylene O-(CO) or (CO)-O-C<sub>2</sub>-C<sub>6</sub>-alkylene-O(CO) groups.

- 2. (canceled):
- 3. (currently amended): The process of elaim 2 claim 1, wherein the substrate is a polymer.
- 4. (canceled):
- 5. (currently amended): The process of elaim 4 claim 1, wherein at least one of the radicals  $R^{4}$  is not ammonioalkyl k is 1.
- 6. (previously presented): The process of claim 1, wherein the compound of the formula I or II is contacted with a first substrate under conditions such that a covalent bond forms between a first end of the compound of the formula I or II and the first substrate, then the reaction product is contacted with a second substrate under conditions such that a covalent bond forms between a second end of the compound of the formula I or II and the second substrate.
- 7. (currently amended): The <u>process</u> of claim 6, wherein at least one of the first or second substrate is selected from the group consisting of biomolecules, polymers and surfaces.
- 8. (previously presented): The process of claim 7, wherein at least one polymer is selected from the group consisting of polyalkyleneamines, polyvinylamine, polyallylamine, polyallylamine, polyethylenimine, chitosan, polyamide/epichlorohydrin resins, polyaminostyrene, peptides and proteins.
- 9. (currently amended): A process for modifying a substrate having one or more functional groups selected from hydroxyl groups and primary and secondary amino groups, the process

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comprising contacting at least one substrate with a compound of formula I under conditions such that the functional groups react, with opening of the 1,3-dioxolane ring and formation of a covalent bond, with the compound of formula I

The process of claim 1, wherein the compound of formula I is selected from the group consisting of

4-phenyloxycarbonyloxymethyl-2-oxo-1,3-dioxolane,

4-(4-phenyloxycarbonyloxy) butyl-2-oxo-1,3-dioxolane, and

4-(vinylsulfonylethoxy)butyl-2-oxo-1,3-dioxolane.

## 10-12. (canceled):

- 13. (previously presented): A modified polymer obtained by the process of claim 3.
- 14. (canceled):
- 15. (previously presented): A finish, dispersant, emulsifier, adhesion promoter, adhesive or contact adhesive for modifying surfaces or for immobilizing active substances comprising the polymer of claim 13.
- 16. (new): A modified polymer obtained by the process of claim 9.

17. (new): A finish, dispersant, emulsifier, adhesion promoter, adhesive or contact adhesive for modifying surfaces or for immobilizing active substances comprising the polymer of claim 16.

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